

### **REMARKS/ARGUMENTS**

This Amendment is submitted in response to the Office Action dated May 4, 2005, and within the period for response extending to August 4, 2005. The status of the claims is summarized below.

5           Claims 14 and 16-32 are cancelled in accordance with the Restriction Requirement Response filed February 22, 2005.

          Claims 1, 3, 8, 9, and 11 are currently amended.

          Claims 1-13 and 15 are pending following entry of this Amendment.

#### 10       **Allowable Subject Matter**

          The Applicants acknowledge the Office's indication that claims 1-13 and 15 would be allowable if rewritten or amended to overcome the rejections under 35 U.S.C. 112, second paragraph. As described below, the Applicants have amended the claims to overcome the rejections under 35 U.S.C. 112. Therefore, the Applicants submit that each  
15       of claims 1-13 and 15, as amended, is allowable.

#### **Rejections under 35 U.S.C. § 112**

          Claims 1-13 and 15 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter  
20       which the Applicants regard as the invention. These rejections are traversed.

          With respect to claim 1, the Office has inquired as to whether the one or more CMP control parameters to be applied in the subsequent CMP operation are the same as the one or more CMP control parameters used to train the neural network. In response, the one or more CMP control parameters to be applied in the subsequent CMP operation  
25       are the same as the one or more CMP control parameters used to train the neural network. It should be understood, however, that each of the CMP control parameters refers to the

parameter itself rather than a specific value for the parameter. In claim 1, the term "data" is used to refer to the specific values for the one or more CMP control parameters. To provide further clarification, claim 1 has been amended to recite the following:

5           "using the neural network to estimate the CMP result of a subsequent CMP operation based on data to be applied in the subsequent CMP operation for the one or more CMP control parameters."

With respect to claim 9, the Office has inquired as to whether the one or more CMP control parameters to be used in a subsequent CMP operation are the same as the one or more CMP control parameters associated with the obtained CMP result as used to  
10       train the neural network. In response, the one or more CMP control parameters to be used in the subsequent CMP operation are the same as the one or more CMP control parameters associated with the obtained CMP result as used to train the neural network. To provide further clarification, claim 9 has been amended to recite the following:

15           "using the neural network to determine values for one or more CMP control parameters to be used in a subsequent CMP operation such that the obtained CMP result for the subsequent CMP operation is acceptable relative to the desired CMP result, wherein the one or more CMP control parameters to be used in the subsequent CMP operation are the same as the one or more CMP control parameters associated with the obtained CMP result."

20           With respect to claims 3 and 11, the Office has posed the following questions: "An air bearing pressure of what?" and "A platen height of what?" In response, the Applicants have amended each of claims 3 and 11 to clarify that the air bearing pressure parameter refers to an air bearing pressure present between a platen and an underside of a polishing pad within a CMP system. Also, the parameter platen height has been replaced  
25       by a description of the platen height as a distance of the platen from the underside of the polishing pad.

With respect to claim 8, the Office has inquired as to how the one or more CMP control parameters are applied in the subsequent CMP operation if the subsequent CMP operation is not recited as being performed. Also, the Office has inquired as to how there can be a CMP result of the subsequent CMP operation if the subsequent CMP operation is not recited as being performed. In response, the Applicants have amended claim 8 to recite an operation of "performing the subsequent CMP operation using the data to be applied in the subsequent CMP operation for the one or more CMP control parameters."

The Applicants submit that claims 1-13 and 15, as-amended, particularly point out and distinctly claim the subject matter which the Applicants regard as the invention. Therefore, the Applicants request that the Office withdraw the rejections of claims 1-13 and 15 under 35 U.S.C. 112. The Applicants submit that all of the pending claims are in condition for allowance. Therefore, a Notice of Allowance is requested. If the Examiner has any questions concerning the present Amendment, the Examiner is kindly requested to contact the undersigned at (408) 774-6914. Also, if any additional fees are due in connection with filing this Amendment, the Commissioner is authorized to charge Deposit Account No. 50-0805 (Order No. LAM2P423). A duplicate copy of the transmittal is enclosed for this purpose.

Respectfully submitted,  
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